

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-006617**Date Inspected:** 27-Apr-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1845**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 645**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Li Jia**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

Summary of Items Observed: On this date Caltrans OSM Quality Assurance (QA) Inspector, Larry Viars was present during the times noted above for observations relative to the work being performed.

Bay 3-

QA Inspector observed the following work in progress: FCAW welding of weld joint 014 located on Cross Beam 5, CB202A-001. ZPMC welder was identified as 037705. ZPMC QC is identified as Hu Wei Cheng. The welding appeared to be in conformance with welding procedure specification, WPS-B-T-2232-TC-U4b-F.

Bay 9-

Gantry 1 / PMT 1

The Caltrans QA Inspector monitored the OBG Production Monitoring Test (PMT) for Deck Panel DP293-001 (11BW). The Caltrans QA inspector recorded amperage, voltage and travel speed of the Gas metal Arc Welding (GMAW) root pass and the Submerged Arc Welding (SAW) cover pass. A Visual inspection of the fit up, tack welds, root pass and cover pass was performed by ZPMC QC Li Jia, American Bridge Flour (ABF) QC Cao Hai Zhou and the Caltrans QA. The Caltrans QA observed ZPMC QC Tang Xing Shan perform Ultrasonic testing of the Partial Joint Penetration weld for depth of penetration. Mr. Tang found the depth of penetration of the PMT welds to be in compliance with contract documents. The Caltrans QA inspector designated locations for Macroetch samples (10 locations). Macroetch samples were evaluated with a 7x optical comparator and accepted

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by ZPMC QC, ABF QC and the Caltrans QA Inspector.

This QA Inspector performed Phased Array Ultrasonic Testing (PAUT) of OBG deck panel u-rib Partial Joint Penetration (PJP) welds at tack weld locations. Caltrans NDT personnel performed conventional ultrasonic testing of tack welds. Tack weld locations that exhibited crack like indications in the area of interest were marked and recorded prior to PAUT. PAUT was performed in accordance with Caltrans UT procedure “ Phased Array Testing for detection of planar discontinuities (cracks) in PJP welds. Results of Deck Panels evaluated are as follows:

DP125-001 (9DW): 38 locations tested with 15 locations rejected.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

### Summary of Conversations:

Only general conversations between QC and QA occurred this date.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 150 0042 2372, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Viars,Larry	Quality Assurance Inspector
<b>Reviewed By:</b>	Carreon,Albert	QA Reviewer

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